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(54) Title: IMPROVED RECORDABLE COMPACT DISK WRITING AND PLAYING APPARATUS

(57) Abstract: Recordable compact disc player and media. Improved power consumption, aerodynamics and use of data compression allow large quantities of music to be stored and played back. Storage space is increased by recording information on the land and grooves of 8 cm recordable media. Aerodynamic guide vanes are provided on the disc enclosure interior and the discs are textured for improved aerodynamic performance. A play list and play list is browser is further provided and media can also be visibly labelled whilst written, providing a storage device with a visible fingerprint or identifier characteristic of the owner.





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## United States Patent [19]

Hayashi et al.

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[45] Date of Patent: Nov. 26, 1996

[54] OPTICAL RECORDING MATERIALS,  
METHOD FOR PREPARING THE SAME AND  
OPTICAL CARDS HAVING THE SAME

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## Related U.S. Application Data

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## [57] ABSTRACT

An optical recording material comprising: a thin film or membrane of a hydrophobic binding agent; and metallic particles having a diameter of 0.003  $\mu$ m to 3  $\mu$ m dispersed in said film or membrane wherein the density of said metallic particles is higher near at least one surface of said film or membrane as compared with another portion of said film or membrane, each metallic particle having a nucleus and an outer coating, said outer coating consisting of at least one metal having a melting point of 250° C. to 1800° C. and a thermal conductivity at 0° C. of 5  $\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  to 450  $\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  wherein the reflectivity of the surface of said film or membrane where the density of said metallic particle is higher is 10 to 90%, a method for preparing the optical recording material and an optical card containing the optical recording material.

40 Claims, 8 Drawing Sheets

